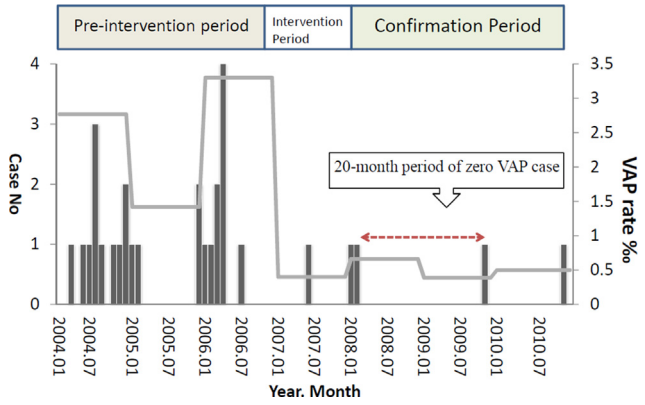
cases of VAP. A record of 20-month period of zero VAP case from March 2008 to October 2009 had achieved.



Conclusions: Our experience has shown that the implementation of VAP bundle, can be effective in reducing ventilator-associated pneumonia occurred.

PS 1-110

EFFECTIVENESS ANALYSIS OF CROSS-FUNCTIONAL TEAM TO IMPLEMENT CENTRAL VENOUS CATHETER CARE BUNDLE

Ming-Chin Chan [a], Ching-Mei Chang [a], Yu-Hui Chiu [a], Tzu-Feng Huang [a], Chih-Chien Wang [b]. *[a]Infection Control Office, Tri-Service General Hospital, Taipei, Taiwan; [b]Department of Pediatrics, Tri-Service General Hospital, Taipei, Taiwan*

Purpose: Central venous catheterization has become the most important treatment in modern clinical medicine; however, the incidence of central line-associated bloodstream infection (CLABSI) might increase if strict sterile precautions were not followed. Hence, many countries are implementing central venous catheter (CVC) care bundle, which includes hand hygiene, maximal barrier precaution, chlorhexidine skin antisepsis, optimal catheter site selection avoiding femoral site, bundle checklist to supervise catheterization procedure, daily review of line necessity with prompt removal of unnecessary lines. These bundle cares were proved to be effective to significantly reduce the CLABSI incidence.
Methods: The study described the processes and results of implementing the CVC care bundle from March 2013 to May 2014 in an 1800 beds medical center in northern Taiwan. The CLABSI was collected and compared between pre-intervention phase (March 2012—February 2013) and post-intervention phase (March 2013—May 2014). We organized a special cross-functional team chaired by associate superintendent of the hospital and developed the CVC cart. We also held CVC care bundle educations for all healthcare workers. Audit teams were set and compliance of bundle elements were monitored.
Results: After using CVC care bundle elements and equipment, combined with monthly review and weekly audit of the healthcare workers' compliance, the daily assessment compliance rate rose from 60% to 95% in doctor and maintained 95% and above in nurse. The number of CLABSI dropped from 172 to 137, and the CLABSI incidence rate decreased from 11.47‰ to 6.88‰ ($p < 0.001$). By the result, we can predict that 192 cases were reduced, and about NT$14 million was saved.
Conclusions: Implementing CVC care bundle is an important and effective medical practice for patients' safety. It also significantly reduces the incidence of CLABSI. Therefore, the CVC care bundle is indeed feasible and effective.

PS 1-111

HAND HYGIENE COMPLIANCE IMPROVEMENT USING THE WHO MULTIMODAL HAND HYGIENE IMPROVEMENT STRATEGY IN SILOAM HOSPITALS SURABAYA INDONESIA

Bernadetta Indah Mustikawati [a], Niken Syitharini [b], Sri Widyaningtyastuti [c], Lisa Gunawan [d]. *[a]Quality and Risk Siloam Hospitals Surabaya; [b]Infection Control Nurse Siloam Hospitals Surabaya; [c]Infection Control Nurse Siloam Hospitals Surabaya; [d]Quality and Risk Siloam Hospitals Surabaya*

Purpose: To Improve HH compliance among HCW in Siloam Hospitals Surabaya from 72,9% to reach WHO standard of 85%.
Methods: Programs based on the WHO Guidelines on Hand hygiene in Health Care 2009 General strategies including Executive Sponsorship, Lead Coordinator, Team &Project Implementation Plan : **1)*System Change Initiatives***. HH policy, Ward infrastructure survey every 6 month, Budget for the continuous procurement of HH product, Evaluation of tolerability and acceptability of Alcohol based handrub. **2)*Training and education***. Mandatory training for all professional categories: Regular training for medical, nursing staff and all professional every 6 month, Commencement of all employment in induction program training, Visiting Physician in hospital events: Doctor forum, AB stewardship case study, Training & Education module, System to evaluate & validate the implementation of HH training education program : portfolio, sticker in staff's ID card. **3)*Evaluation and feedback***. HH audit compliance report: Monthly in Executive Committee, and Quality Indicator Patient Safety Goals in Coordination Meeting. Every 3 months in IC team meeting and 6 months in IC Committee. External audit by: ISO:9001 annually, Global Quality Development annually. **4)*Reminders in the workplace***. Posters in public area, corridors and point of care, paging system, screen saver, finger print attendance machine with HH reminder, IPSG Video, HH Leaflet ,HH Apron.**5)*Institutional Safety Climate for HH***. CEO supports: Commitment with official letter, Quality Improvement program across Siloam Hospitals, Dashboard report Siloam Hospitals, Key performance indicator for HCW, and HH Surveillance.
Results: HH Compliance after using WHO Multimodal HH Improvement Strategy was increased 72,9% (2009) up to 98,7% (Jan—Sept, 2014).
Conclusions: Increased HH compliance can be achieved through supports from Hospital Leaders and Implementation of WHO Multimodal HH Improvement Strategy.

PS 1-112

COMPARISON OF THE DISINFECTION EFFICACY BY HYDROGEN PEROXIDE DRY-MIST WITH BY 0.5% CHLORINE-BASED SOLUTION FOR ENVIRONMENTAL CLEANSING

Yu-Ching Chen [a], Mao-Cheng Ge [a,c], Ting-Ying Chung [a], Chun-Sui Lin [a], Po-Yen Huang [a,b], Ting-Shu Wu [a,b]. *[a]Infection Control Committee; [b]Division of Infectious Diseases, Department of Internal Medicine; [c]Department of Laboratory Medicine*

Purpose: Environmental cleanliness is one of the key elements to provide safety care in hospital settings. A medical center in northern Taiwan has implemented Level I program using chlorine-containing disinfectant for environmental cleansing. We also introduced the hydrogen peroxide dry-mist disinfection system and performed environment cultures in order to compare the disinfection ability between the two systems.
Methods: We selected two surgical operation rooms with different type of operations to perform this study. On the day before May 1, 2014, routine environmental cleansing with 0.5% chlorine was performed in both rooms by trained cleaning staff. The next day morning, we collected 50 swab samples (25 for each room) from environmental surfaces including equipment, and any places which may be overlooked under routine process. All 50 sampled locations were tagged for subsequent comparison and sampling. Then hydrogen peroxide dry-mist system was implemented in both rooms according to the manufacturer's guidance. After completion of disinfection, we collected the 50 swab samples adjacent to the locations marked by previous tags. All swabs were be cultured to check the bacterial load. Culture positive rate (%) was used as a performance indicator to assess disinfection efficacy between the two methods.
Results: Overall, before disinfection with hydrogen peroxide dry-mist system, 27 (54%) of 50 samples obtained from both rooms were positive for bacterial growth. After disinfection, 2 (4%) of 50 samples were positive ($p < 0.001$). Before disinfection, the rate between the two rooms were not significantly different (16/25, 64% vs. 11/25, 44%; $p = 0.156$). The positive sites were mainly door handles, chairs, keyboards, and grips of equipment, which may be frequently touched by staff. Relative pathogenic bacteria could be reduced significantly after disinfection (5/50, 10% vs. 0/50, 0%; $p = 0.025$) as well.
Discussion: Our study suggest that hydrogen peroxide dry-mist disinfection system is significantly more effective than 0.5% chlorine-based solution at decreasing bacterial load and apparently may decrease the risk of